

CLAIMS

Method in a multicarrier wireless telecommunication system interchanging radio

5 communication between base stations (BS) and mobile user stations (MS) of the system, wherein information signals are transmitted over the air interface relating to operational bands (I, II, , III) of the radio spectrum used by the system characterised in that the signalling comprises information of the bandwidth and location in the spectrum of the operational bands as part of the information in one or several sub

10 carriers of the bands.

2. The method of claim 1 wherein the location information is explicitly signalled or implicitly derivable from synchronisation signals.

15 3. The method of claim 1 or 2 wherein the signalling is received (R) by the mobile users (MS) which detects the information about available blocks of spectrum and stores it into a memory (M).

20 3. The method of claim 1 - 3 wherein the size information is repeated regularly in subsequent carriers of the operational band (e.g. every 128th sub carrier).

4. The method of claim 1-4 wherein the information comprises the start and stop frequencies (f1 and f2 respectively) of the band and thereby the bandwidth (f2 - f1).

25 5. The method of claim 1-4 wherein the information comprises an identifying number representing the size and location of available operational bands.

30 6. The method of claim 3 wherein the mobile (MS) repeatedly scans the information signalling for updating its memory (M) about changing conditions relating to the operational bands.

7. The method of any of the preceding claims wherein the operational bands belong to different operators (A, B) and wherein the subscribers of the different operators may partly or wholly have access to each others operational bands

5 8. The method of any of the preceding claims wherein a mobile station (MS) requests access to a multicarrier band with N carriers for downloading information comprising the following steps,

- the mobile station searches the radio interface for an N-carrier band by looking for location and size information (II),
- the communication system assigns a free band with $N+\square$ carriers to the mobile upon the request where \square is zero or a small number compared to N (III),
- the mobile station downloads the information (IV).

15 9. A wireless multicarrier telecommunication system including transmitting units (BS) controlled by a traffic controlling centre (TCC) and whereby the transmitting units have means to transmit information signals to mobile units (MS) using the system relating to available resources of the system characterised in that the information signals comprises information about the size and location of available bandwidth in a number of operational bands allocated to the system.

20 10. A base station node (BS) in a multicarrier telecommunication system comprising transmitting means for transmitting information relating to properties of available operational bands (I, II, III) of the spectrum allocated to the system characterised in that the transmitting means include means for transferring data related to size and
25 location of the available operational bands.

11. A mobile station node (MS) in a multicarrier telecommunication system characterised in that it comprises means (R) for receiving information relating to available operational bands in terms of size and location in the radio spectrum.

30 12. The mobile station of claim 9 wherein it further comprises memory means (M) for storing the operational band relating data.